What is claimed is:

1. A relocatable security inspection system, comprising:

a frame having first and second leg sections spaced apart from one another, the frame defining an inspection area;

an X-ray source disposed on the frame for generating an X-ray beam into the inspection area toward the object;

a detector disposed on the frame distally from the X-ray source for receiving the X-ray beam after the X-ray beam passes through the object, and for producing an output signal representative of the object and contents thereof;

an image processor for converting the output signal into a visual image of the object and contents thereof;

2. The system of claim 1 wherein the frame is movable along a dimension of the object.

3. The system of claim 2 further comprising a self-propelling drive attached to the frame for moving the frame.

4. The system of claim 3 wherein the self-propelling drive comprises an electric motor, the electric motor further used for regulating a speed and an alignment of the frame during movement of the frame.

5. The system of claim 2 further comprising a track for guiding the frame, wherein at least one of the first and second leg sections includes a wheel disposed thereon, the wheel movable along the track.

6. The system of claim 2 further comprising a plurality of wheels disposed on the first and second leg sections for providing rolling movement to the frame.

7. The system of claim 6 further comprising a tire disposed on each of the plurality of wheels for providing rolling movement to the frame along a surface.

8. The system of claim 1 wherein the first and second leg sections each include a base portion configured to rest on a surface and maintain the frame in a stationary position during imaging of a moving object.

9. The system of claim 1 further comprising a delivery vehicle for deploying the frame to an imaging position.

10. The system of claim 1 further comprising a radiation shield attached to the frame for preventing radiation produced by the X-ray beam from escaping the inspection area.

11. The system of claim 1 wherein the frame is collapsible.

12. The system of claim 1 wherein the X-ray source is disposed on one of the first and second leg sections.

13. The system of claim 1 wherein the detector is disposed on at least one of the first and second leg sections and a support section that connects the first and second leg sections.

14. The system of claim 1 further comprising an operator cabin having controls therein for operating the frame.

15. A relocatable security inspection system, comprising:

a support beam section having a first end and a second end;

a first leg section pivotally connected to the first end of the support beam section, the first leg section pivotable between an imaging position in which the support beam section and the first leg section are substantially perpendicular to one another, and a transport position in which the support beam section and the first leg section are substantially parallel to one another;

a second leg section pivotally connected to the second end of the support beam section, the second leg section pivotable between an imaging position in which the support beam section and the second leg section are substantially perpendicular to one another, and a transport position in which the support beam section and the second leg section are substantially parallel to one another.

16. The system of claim 15 wherein the support beam section comprises two sub-sections pivotally connected to one another, the two sub-sections pivotable between an imaging position in which the two sub-sections are substantially linear

relative to one another, and a transport position in which the two sub-sections are substantially parallel to one another.

17. The system of claim 15 further comprising an X-ray source disposed on one of the first and second leg sections for generating an X-ray beam toward the object to be imaged.

18. The system of claim 17 further comprising a detector disposed on at least one of the first and second leg sections and the support beam section for receiving the X-ray beam after the X-ray beam passes through the object, and for producing an output signal representative of the object and contents thereof.

19. The system of claim 18 further comprising means for converting the output signal into a visual image of the object and contents thereof.

20. The system of claim 15 further comprising a self-propelling drive attached to at least one of the first and second leg sections for moving the frame.

21 The system of claim 15 further comprising a wheel disposed on at least one of the first and second leg sections for providing rolling movement of the frame.

22. The system of claim 21 wherein the wheel is configured to roll along a track that guides the frame.

23. The system of claim 21 further comprising a tire on the wheel to provide rolling movement to the frame along a surface.

24. The system of claim 15 wherein the first and second leg sections each include a base portion configured to rest on a surface; and maintain the frame in a stationary position during imaging of a moving object.

25. The system of claim 15 further comprising, a locking mechanism disposed on at least one of the support beam section and the first and second leg sections for detachably connecting the inspection system to a delivery vehicle.

26. A method of inspecting an object, comprising the steps:

deploying an X-ray imaging scanner from a delivery vehicle into an imaging position wherein an inspection area is defined by the scanner;

generating an X-ray beam from the scanner into the inspection area toward an object to be imaged;

detecting the X-ray beam after the X-ray beam passes through the object;

producing an output signal representative of the object and contents thereof;

converting the output signal into a visual image of the object and contents thereof.

27. The method of claim 26 further comprising the step of moving the object through the inspection area while the scanner remains stationary.

28. The method of claim 27 wherein the step of moving the object comprises towing the object through the inspection area.

29. The method of claim 27 wherein the object is a vehicle and the step of moving the object comprises a driver driving the vehicle through the inspection area, wherein the step of generating the X-ray beam does not occur until after a section of the vehicle containing the driver has passed through the inspection area, such that the driver is not directly exposed to the X-ray beam.

30. The method of claim 26 further comprising the step of moving the scanner relative to the object to image the object.

31. The method of claim 30 wherein the step of moving the scanner comprises moving the scanner along a track that guides the scanner.

32. The method of claim 30 wherein the step of moving the scanner comprises self-propelling the scanner relative to the object.

33. The method of claim 32 further comprising the step of regulating the speed and/or alignment of the scanner with an electric motor.

34. The method of claim 30 further comprising the step of X-ray imaging the object at a plurality of energy levels such that visual images of metallic materials, organic materials, and inorganic materials located inside the object are distinguishable from one another.

35. A method of deploying a security inspection system from a delivery vehicle to an inspection site, the inspection system including a frame having first and second leg sections pivotally connected to opposite ends of an support beam section, comprising the steps of:

activating a deployment mechanism located on the delivery vehicle;

moving the frame into an X-ray imaging position via the deployment mechanism;

inclining a bed section of the delivery vehicle until a base portion of at least one of the first and second leg sections comes into contact with at least one of a surface of the inspection site and an object located on the surface of the inspection site;

detaching the frame from the bed section of the delivery vehicle such that the frame comes to rest in a substantially upright position on the surface of the inspection site.

36. The method of claim 35 wherein the step of moving the frame into an X-ray imaging position comprises moving the first and second leg sections away from one another such that the support beam section pivots into a locked position in which the support beam section is substantially perpendicular to the first and second leg sections.

37. The method of claim 35 wherein the inclining step comprises inclining the bed section until a wheel located on the base portion of at least one of the first and second leg sections engages a track secured to the surface of the inspection site.

38. The method of claim 35 wherein the inclining step comprises inclining the bed section until a plurality of tires located on the base portions of the first and second leg sections come into contact with the surface of the inspection site.

39. A method of deploying a security inspection system from a delivery vehicle to an inspection site, the inspection system including a frame having first and second leg sections pivotally connected to opposite ends of a support beam section, the support beam section comprising first and second scanner segments pivotally connected to one another, the method comprising the steps of:

activating a deployment mechanism located on the delivery vehicle;

moving the first and second leg sections away from one another via the deployment mechanism such that the support beam section pivots into an imaging position in which the first and second scanner segments are locked into place substantially linear to one another, and substantially perpendicular to the first and second leg sections;

inclining a bed section of the delivery vehicle until a base portion of at least one of the first and second leg sections comes into contact with at least one of a surface of the inspection site and an object located on the surface of the inspection site;

detaching the frame from the bed section of the delivery vehicle such that the frame comes to rest in a substantially upright position on the surface of the inspection site.

40. The method of claim 39 wherein the inclining step comprises inclining the bed section until a wheel located on the base portion of at least one of the first and second leg sections engages a track secured to the surface of the inspection site.

41. The method of claim 39 wherein the inclining step comprises inclining the bed section until a plurality of tires located on the base portions of the first and second leg sections come into contact with the surface of the inspection site.

42. The system of claim 3 wherein the self-propelling drive further comprises:

a light source that emits a light beam representing the desired path of travel of the frame, the light source being positioned to one side of the frame;

a light sensor mounted to the frame and that receives light from the light source and that detects whether the frame is straying from the desired path of travel; and

a processor to provide instructions to the frame to correct its path of travel based on information from the light sensor.

43. The system of claim 42 wherein the light sensor further comprises a lens, and at least two photosensors.

44. The system of claim 42 wherein the light source and light sensor guide the forward movement of the frame, and a second light source is positioned to the other side of the frame, and a second light sensor is mounted on the other side of the frame, said second light source and second light sensor guiding the reverse movement of the frame.

45. The system of claim 42, further comprising:

an end of travel marker positioned to one side of the frame; and

a sensor mounted to the frame that senses the end of travel marker to stop the frame.

46. The system of claim 45 wherein the sensor senses the end of travel marker to stop the forward movement of the frame, and a second end of travel marker is positioned to the other side of the frame, and a second sensor is mounted on the other side of the frame, wherein said second sensor senses the second end of travel marker to stop the reverse movement of the frame.

47. The system of claim 11 wherein the frame is collapsible via a plurality of hinges.

48. The system of claim 11, further comprising a delivery vehicle for deploying the frame to an imaging position, and for collapsing the frame to a transport position.

49. The system of claim 1, the frame further comprising a support section that connects the first and second leg sections.

50. The method of claim 26 wherein the X-ray imaging scanner is collapsible, the deploying step further comprising transforming the X-ray imaging scanner from a collapsed position to the imaging position.

51. The method of claim 32 further comprising the step of regulating the speed and/or alignment with a light source, a light sensor and a processor.

52. The system of claim 15 wherein the first leg section and second leg section are detachable from the support beam.

53. The system of claim 15 wherein the first leg section and second leg section comprise telescoping members.

54. The system of claim 15 wherein the first leg section and second leg section are collapsible via hinges located along their lengths.